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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,876	12/05/2001	James F. Stevens	12801.0083.NPUS03 TEXS:08	5220
26361	7590	07/17/2006	EXAMINER	
STEPHEN H. CAGLE HOWREY, SIMON, ARNOLD & WHITE, LLP 750 BERING DRIVE HOUSTON, TX 77057			DUONG, THANH P	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/006,876

Applicant(s)

STEVENS ET AL.

Examiner

Tom P. Duong

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received. ~

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' remarks and amendments filed on April 27, 2006 have been carefully considered. Claims 9-21 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 9-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagawa et al. (6,024,774) or considered with Clawson (6,641,625). Regarding claims 9, 11-12, 16, and 18, Nakagawa discloses an apparatus for selectively reducing carbon monoxide content (Col. 2, lines 45-60) of a hydrogen rich gas (Col. 5, lines 10-15), comprising: a catalyst bed containing an oxidation catalyst (Col. 3, lines 8-20); a porous tube (4) positioned substantially within a catalyst bed for distributing raw material gas throughout the catalyst bed; and a cooling jacket (7) for maintaining the reactor operating temperature (Fig. 1); and the porous tube is an alumina tube (Col. 7, lines 60-63). With respect to the use of a porous tube to distribute an oxygen containing stream throughout the catalyst bed, Nakagawa discloses the porous tube of the claimed invention; therefore, the apparatus of Nakagawa is capable of distribute an oxygen-containing stream throughout the catalyst bed. Note, expressions relating the

apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. See *Ex parte Thibault* and *In re Otto*. Also, an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*. Regarding claims 10 and 17, Nakagawa discloses the porous tube is made of ceramic materials or heat resisting metal (Col. 4, lines 1-5) but is silent with respect to the porous tube is made of stainless steel material. It would have been obvious to one skill in the art to select stainless material as the material of construction for the porous tube on the basis of design requirement such as corrosion resistance. Furthermore, it is conventional to provide porous tube with stainless steel material to facilitate the oxidation process as evidenced by USPN 6,641,625; Col. 24, lines 8-18). Regarding claims 13-14 and 19-20, Nakagawa is silent with respect to temperature claimed range. However, Nakagawa discloses the apparatus is operating at a much higher temperature range (Col. 1, lines 50-57) than the claimed invention; therefore, one of ordinary skill would have expected the apparatus of Nakagawa is capable of operating within the temperature range of the claimed invention. Regarding claims 15 and 21, Nakagawa discloses the use of a cooling circulating pipe 7 with cooling means to control the reaction temperature but is silent with respect to the type of coolant. It would have been obvious in view of Nakagawa to one having ordinary skill in the art to use any conventional coolant means such as water, steam, and other coolants to control the temperature of the reactor to obtain a high purity of hydrogen.

Response to Arguments

Applicant's arguments filed April 27, 2006 have been fully considered but they are not persuasive. In response to applicant's arguments, the recitation "for selectively reducing the carbon monoxide content of a hydrogen rich gas" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Furthermore, the apparatus of the applied references above disclose all structural limitations of the claimed invention and therefore the apparatus is capable of reducing carbon monoxide content to provide a pure hydrogen rich gas. Note, expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. See *Ex parte Thibault* and *In re Otto*. Also, an apparatus must be distinguished from the prior art in terms of structure rather than function. See *In re Schreiber*. See MPEP 2114 and 2115.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Duong
July 6, 2006

TD



Glenn Caidarola
Supervisory Patent Examiner
Technology Center 1700